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5
6 **UNITED STATES DISTRICT COURT**
7 **NORTHERN DISTRICT OF CALIFORNIA**
SAN FRANCISCO DIVISION

8
9 AARON GREENSPAN,
10 Plaintiff,
11 v.
12 OMAR QAZI, SMICK ENTERPRISES, INC.,
13 ELON MUSK, and TESLA, INC.,
14 Defendants.

15 Case No. 3:20-cv-03426-JD

16
17 **PLAINTIFF'S NOTICE OF**
MOTION AND MOTION FOR
RECUSAL PURSUANT TO
28 U.S.C. § 455

18 Date: TBD
19 Time: TBD
20 Courtroom: 11, 19th Floor

21 Judge: Hon. James Donato
Complaint Filed: May 20, 2020
TAC Filed: February 12, 2021

NOTICE OF MOTION AND MOTION

TO ALL PARTIES AND THEIR ATTORNEYS OF RECORD: PLEASE TAKE

NOTICE THAT Plaintiff Aaron Greenspan hereby moves this Court for the recusal of Judge James Donato pursuant to 28 U.S.C. § 455 on the basis of his prior relationship with Attorney John C. Dwyer (who represents Defendants Elon Musk and Tesla, Inc.) during their overlapping employment at Cooley LLP; on the basis of Judge Donato’s prior representation of key business partners of Defendant Tesla, Inc. whose involvement is likely to arise in this case; on the basis of Judge Donato’s apparent unwillingness to consider the case before him; and on the basis of various displays of bias. This Motion is based upon this Notice of Motion and Motion and the accompanying Memorandum of Points and Authorities, the papers on file in this action, and such other and further evidence or argument that the Court may consider.

STATEMENT OF RELIEF SOUGHT

Plaintiff seeks the recusal of Judge James Donato and the re-assignment of this case to a different District Judge by the Clerk of Court.

STATEMENT OF ISSUE TO BE DECIDED

The issue to be decided is whether pursuant to 28 U.S.C § 455, Judge James Donato must recuse himself or should recuse himself to avoid the appearance of partiality.

STATEMENT OF FACTS

This action was filed on May 20, 2020. ECF No. 1. Initially, the case was assigned to Magistrate Judge Jacqueline Scott Corley. ECF No. 3. On May 27, 2020, Plaintiff Aaron Greenspan declined consent to have the case heard by a Magistrate Judge, and so it was randomly re-assigned to District Judge James Donato. ECF Nos. 7, 8, 9.

While Defendants Elon Musk and Tesla, Inc. (“Tesla” and together, “Tesla Defendants”) were initially represented by internal counsel for Tesla, they eventually retained the services of Cooley LLP (“Cooley”). On July 9, 2020, after Judge Donato was assigned to the case, Cooley attorneys Aarti G. Reddy and John C. Dwyer formally appeared in this case on Tesla Defendants’ behalf. ECF Nos. 32, 33. Plaintiff was subjected to continuous harassment by

1 Defendant Omar Qazi throughout these proceedings and repeatedly petitioned the Court for
 2 sanctions accordingly. ECF Nos. 66, 77, 83. All of these requests were denied. ECF No. 102.
 3 When the harassment became intolerable, Plaintiff requested leave to file for a temporary
 4 restraining order. ECF No. 113. This was also denied. ECF No. 115. The Court issued its first
 5 substantive ruling on Plaintiff's claims on June 23, 2021. ECF No. 125.

6 **MEMORANDUM OF POINTS AND AUTHORITIES**

7 **I. Judge Donato Is Conflicted On Account Of His Prior Employment At Cooley LLP**

8 When he worked in private practice prior to his nomination for judgeship, Judge Donato
 9 worked for Cooley LLP, among other firms. While Cooley is a large firm with many clients,¹
 10 Judge Donato specifically worked with Attorney John C. Dwyer while representing Nvidia
 11 Corporation ("Nvidia"). For example, in *Jacobs v. Nvidia Corporation et al*, Case No. 3:07-cv-
 12 00302 (N.D. Cal 2007), "JAMES DONATO (146140)" and "JOHN C. DWYER (136533)"
 13 appear directly adjacent to each other in the header of several court filings. *Jacobs* was one of
 14 roughly a dozen cases on which Judge Donato and Attorney Dwyer worked together representing
 15 Nvidia. According to court filings, at that time, both Judge Donato and Attorney Dwyer worked
 16 out of Cooley's San Francisco office. According to other documents, both were partners of the
 17 firm.²

18 28 U.S.C. § 455(a) states that, "Any justice, judge, or magistrate judge of the United
 19 States shall disqualify himself in any proceeding in which his impartiality might reasonably be
 20 questioned." 28 U.S.C. § 455(b)(2) states that, "He shall also disqualify himself in the following
 21 circumstances: Where in private practice he served as lawyer in the matter in controversy, or a

22

23 ¹ Cooley also represented and still represents Mark Zuckerberg and Facebook, Inc. regarding
 24 their settlement agreement with Plaintiff. Judge Donato appears to doubt the facts of Plaintiff's
 25 involvement with Facebook—facts verified by *The New York Times* and Zuckerberg himself—
 26 based on use of the words "says" and "a claim" on page 3 of ECF No. 125, not used otherwise.

27 ² That Attorney Dwyer represents Tesla Defendants in this particular case may not be a
 28 coincidence. Cooley does represent Tesla in other cases in the Northern District of California,
 such as Case No. 3:18-cv-04865-EMC, *In re Tesla Inc. Securities Litigation*; 3:17-cv-05434-
 WHO, *Skiles v. Tesla, Inc. et al*; and Case No. 3:18-cv-07460-JD, *Nikola Corporation v. Tesla
 Incorporated*, but this case is the only one in which Cooley represents Tesla and where Judge
 Donato's former colleague, Attorney Dwyer, has made an appearance.

1 lawyer with whom he previously practiced law served during such association as a lawyer
 2 concerning the matter, or the judge or such lawyer has been a material witness concerning it.”
 3 28 U.S.C. § 455. Both sections of the statute are at issue in these proceedings.

4 There can be no debate that Attorney Dwyer qualifies under 28 U.S.C. § 455(b)(2) as “a
 5 lawyer with whom [Judge Donato] previously practiced law.”³ The only possible question is
 6 whether Judge Donato and Attorney Dwyer “served during such association as a lawyer
 7 concerning the matter.”

8 The “matter” presently before this Court concerns a wide-ranging set of allegations into
 9 accounting practices by Tesla Defendants, which involve issues stemming from questionable
 10 cash balances to revenue recognition for next-generation assisted driving systems to cover-ups of
 11 valuable factory waste from battery manufacturing. Tesla is a large corporation, and it cannot
 12 produce all of its products without the substantial assistance of partner companies who are more
 13 strategically important than typical corporate vendors. Some of these partner companies are, for
 14 example, Panasonic Corporation, CATL, LG—all of which are involved in battery
 15 manufacturing—and Nvidia Corporation. Nvidia has provided graphics processing units
 16 (“GPUs”) to Tesla for a number of applications, including Tesla’s “Autopilot” computer and
 17 most recently, Tesla servers. *See Exhibit A, “Tesla Unveils Top AV Training Supercomputer
 18 Powered by NVIDIA A100 GPUs.”*

19 In addition to Judge Donato representing Nvidia alongside Attorney Dwyer, Judge
 20 Donato also represented LG Electronics USA, Inc., a division of Tesla partner LG, during his
 21 time as an attorney at Sherman & Sterling, LLP, as recently as 2013. LG has recently been in the
 22 news as this case has been pending with announcements regarding its future plans involving
 23 Tesla. *See Exhibit B, “Exclusive: LG hopes to make new battery cells for Tesla in 2023 in U.S.
 24 or Europe - sources.”*

25 This constellation of conflicts eliminates Judge Donato’s ability to claim impartiality in
 26 this matter, and mandates recusal pursuant to 28 U.S.C. § 455(a) and 28 U.S.C. § 455(b)(2).

27 ³ There is also no question that Cooley attorney Aarti Reddy was a material witness to some of
 28 the events at issue in this lawsuit during her prior employment with Defendant Tesla, Inc.

1 **II. Judge Donato's Handling of this Case Calls His Impartiality Into Question**

2 **A. Judicial Canon 3(A)(2) Requires The Assigned Judge To Hear The Case and
3 to Maintain Order and Decorum**

4 Judge Donato, like all federal judges, is required to abide by the Code of Conduct for
5 United States Judges.⁴ This Code comprises enumerated ethical Canons, including Canon
6 3(A)(2), which states, “A judge should hear and decide matters assigned, unless disqualified, and
7 should maintain order and decorum in all judicial proceedings.” Unfortunately, at this point in
8 the proceedings, there is sufficient evidence to suggest that Judge Donato has failed to uphold
9 this section of Canon 3 for two reasons: he has not heard the actual case before him; and he has
10 failed to maintain order and decorum, repeatedly brushing aside Plaintiff’s serious concerns.

11 **1. Judge Donato Opted Not To Hear the Case Before Him by Ignoring
12 Multiple Key Allegations In The Third Supplemental and Amended
13 Complaint (“TAC”)**

14 In his June 23, 2021 Order Re Motions To Dismiss And Motion To Strike, ECF No. 125
15 (the “Order”), Judge Donato neglected to address many of the most important allegations in this
16 lawsuit, as if those allegations had never been made. His only commentary on half of the
17 extremely detailed securities allegations in the TAC was, “Similar deficiencies run through all 35
18 securities fraud issues raised in the TAC. Overall, the TAC has not identified actionable false or
19 misleading statements with the requisite level of particularity, and so dismissal of the securities
20 fraud claim is warranted.” This non-specific, conclusory, boilerplate verbiage gives Plaintiff
21 little hope of correcting deficiencies in the complaint. Among the facts not addressed by the
22 Court in any way, yet central to the lawsuit, were:

- 23 a) Defendant Musk’s recent open admissions regarding Tesla’s at-the-time undisclosed
24 yet likely bankruptcy. *See TAC ¶¶ 4, 268* (bold, italic text in Issue No. 1);
- 25 b) Internal Tesla documents spelling out the company’s concealment of hundreds of
26 millions of dollars worth of factory waste and failure to adhere to internal financial
27 controls, among other problems. *See TAC ¶ 272* (bold, italic text in Issue No. 30)

28 ⁴ *See https://www.uscourts.gov/judges-judgeships/code-conduct-united-states-judges.*

1 and TAC Exhibit A;

- 2 c) Defendant Musk’s admission, relevant to scienter, that he believed omitting material
- 3 facts could be necessary in order to “survive” because of the precedent set by the
- 4 failure of Solyndra. *See* TAC ¶ 279(b);
- 5 d) Defendant Tesla’s disclosure that Defendant Musk’s Twitter account was a
- 6 communications medium regulated by the Securities and Exchange Commission. *See*
- 7 TAC ¶ 179 and TAC Exhibit K.
- 8 e) The deposition transcript of former Tesla employee Karl Hansen, also relevant to
- 9 scienter, which stated that Musk was personally on a “telephone conference” where
- 10 “folks in the accounting world” discussed “excess losses of 100 million-plus dollars”
- 11 never disclosed to shareholders. *See* TAC ¶ 272 (Issue No. 30) and TAC Exhibit L;
- 12 f) Defendant Qazi’s placement of banner advertising on various web pages, reflecting
- 13 his commercial intent to profit from libel involving Plaintiff. *See* TAC ¶¶ 147, 160;
- 14 g) Numerous facts indicating that Defendant Omar Qazi had continuously acted in bad
- 15 faith, e.g. that he had created a website to harass Plaintiff’s disabled brother, among
- 16 Plaintiff’s other family members; falsely called Plaintiff a “serial rapist” in public;
- 17 impersonated Plaintiff’s business, family members, and AT&T; and posted altered
- 18 photographs of Plaintiff. *See* TAC ¶¶ 95-96, 161 (Statement Nos. 12, 24), 169.

19 By not addressing any of these key points, among others, Judge Donato did not actually
 20 hear the case in front of him. Judge Donato actively avoided every opportunity to learn more
 21 about the facts of the case by vacating every single hearing scheduled. His Order, misquoting
 22 Plaintiff’s complaint, containing typographical errors, and conflating enumerated securities
 23 “issues” with libelous “statements,” appears to be the rushed work of a judge who did not have
 24 the time and/or interest to hear the case before him except to dismiss all of the claims related to
 25 his former colleague’s clients. This is possibly because many judges are used to *pro se* plaintiffs
 26 making baseless complaints. “The *attitude* of the judges toward *pro se*’s—a generally
 27 unsympathetic attitude...resembles the common tendency to dislike one’s ‘inferiors,’ with

1 obvious exceptions such as pets... [T]hose lawsuits [i.e., lawsuits by pro se's] are viewed as the
 2 least important, the least meritorious, and the least glamorous." REFORMING THE FEDERAL
 3 JUDICIARY at 135 (Richard A. Posner, 1st ed., 2017).

4 **2. Judge Donato Opted Not To Hear the Case Before Him by Repeatedly
 5 Ignoring Plaintiff's Substantiated Argument That Congress Did Not
 6 Intend the PSLRA to Apply To Pro Se Litigants**

7 Early in this case, Plaintiff raised the potentially dispositive question of the application of
 8 the Private Securities Litigation Reform Act (PSLRA) to *pro se* litigants. ECF No. 60. There
 9 exists no Ninth Circuit precedent requiring district judges to impose the burdens of the PSLRA
 10 on *pro se* litigants, no Supreme Court precedent to any similar effect, and a Congressional record
 11 clearly suggesting that the PSLRA should *not* be thus applied since Congress intended the law to
 12 stem nuisance suits *brought by securities lawyers*. Just prior to the passage of the PSLRA, the
 13 Ninth Circuit ruled that a scienter requirement "does unnecessary violence to the fundamental
 14 tenets of notice pleading" and further elaborated:

15 "As a radical departure from basic principles of our notice pleading system, an
 16 inference of scienter test inevitably contributes to the plague of burdensome and
 17 prolix complaints that have become fashionable in securities fraud cases today.
 18 Here, for example, the second amended complaint contains *over 100 pages of
 19 painstakingly detailed allegations* of evidentiary facts. *This level of detail is
 20 typical of the modern securities fraud complaint.* While I deplore such a radical
 21 departure from Rule 8's command of 'simple, concise, and direct' pleadings, it is
 22 inevitable that prudent lawyers, faced with the obstacle of an inference of scienter
 23 test at the pleading stage, will throw into their complaints every scrap of evidence
 24 they can muster" (emphasis added).

25 *In re GlenFed, Inc. Securities Litigation*, 42 F. 3d 1541, 1555 (9th Cir. 1994).

26 Judge Donato declined to consider any of these arguments, including the above Ninth
 27 Circuit precedent (or if he did consider them, there was no indication that he had), issuing an
 28 electronic order on August 7, 2020 with no citation to any law or precedent at all. ECF No. 63.
 In full, it read, "ORDER. The motion to lift discovery stay, Dkt. No. [60], is denied. A stay on
 discovery will continue pending an order on the motion to dismiss, Dkt. No. [56]. Signed by
 Judge James Donato on 8/7/2020."

1 “Such a summary order violates due process and precludes this court from determining
 2 whether the trial court abused its discretion...” *Morin v. Rosenthal*, 19 Cal. Rptr. 3d 149 –
 3 Cal.App.2nd 155 (2004).

4 **3. Judge Donato Repeatedly Overlooked Litigant and Attorney
 5 Misconduct, Causing Prejudice to Plaintiff**

6 Throughout these proceedings, Plaintiff identified instances in which various Defendants:

- 7 a) publicly broadcast non-existent “court orders” from this case to raise defense funds;
- 8 b) openly deleted material evidence;
- 9 c) pretended not to have received service documents that logs show *were* received;
- 10 d) made credible threats and used suicidal language;
- 11 e) repeatedly posted confidential settlement materials;

12 and in which their attorneys:

- 13 f) refused to provide Plaintiff with any working contact information (phone or e-mail);
- 14 g) refused to cooperate with Plaintiff to accept service of process;
- 15 h) deliberately misquoted the Federal Rules of Civil Procedure in an attempt to exploit
 Plaintiff’s *pro se* status;
- 16 i) deliberately cited an outdated version of the Federal Rules of Civil Procedure;
- 17 j) lied to the Court about the content of a recorded voicemail apologizing for some of
 the above;
- 18 k) committed perjury, *later admitted to in writing*.

19 Judge Donato overlooked all of these, not even holding a hearing to better understand the
 20 source of the acrimony, leading to a circus environment and the “flood of pleadings motions”
 21 alluded to in the Order. Had the Court enforced decorum at any point in time, many of these
 22 pleadings would have been avoided or moot. Judge Donato’s failure to do so in violation of
 23 Canon 3(A)(2), as well as attributing Defendants’ serial misconduct to Plaintiff, could reasonably
 24 be perceived as a lack of “impartiality” pursuant to 28 U.S.C. § 455(a).

1 **B. Judge Donato's Order on the TAC Calls His Impartiality Into Question**

2 **1. Judge Donato Selectively Exercised Supplemental Jurisdiction,
3 Benefitting Elon Musk and Tesla, Inc. But Not Other Defendants**

4 In the Order, Judge Donato wrote, “The Court also resolves the challenges to the state
5 law claims against Tesla and Musk, but declines to exercise supplemental jurisdiction over the
6 state law claims against Qazi and Smick pending further order.” It is at the very least confusing
7 that after over one year of pleadings, motion practice, and multiple pleas to the Court to enforce
8 decorum, state law claims involving a billionaire represented by the Judge’s former colleague
9 would be summarily dismissed on the basis of supplemental jurisdiction, but similar or the same
10 state law claims involving other defendants would not merit examination by the Court at all.

11 A reasonable person would have grounds to question Judge Donato’s impartiality in this
12 situation pursuant to 28 U.S.C. § 455(a). One would reasonably expect that a “common nucleus
13 of operative fact” necessary to support supplemental jurisdiction either exists in this case for all
14 defendants or it does not exist for any at all “such that a plaintiff ‘would ordinarily be expected
15 to try them in one judicial proceeding’ (citations omitted).” *Trustees of Construct. v. Desert
16 Valley Landscape*, 333 F. 3d 923, 925 (9th Cir. 2003).

17 **2. In The Context Of The PSLRA, Judge Donato's Interpretation of
18 Rule 8 Has Mandated An Impossible Catch-22 Pleading Standard
With Moving Goalposts**

19 In his Order, Judge Donato lamented the length of the complaints Plaintiff has filed in
20 this case, seemingly deliberately conflating pages of allegations with pages of exhibits to make
21 the filings seem far more unreasonable than they actually are.⁵ The complaints filed were
22 detailed, yet well within what other federal judges have considered reasonable under Federal
23 Rules of Civil Procedure (“Rule”) 8, due to Plaintiff’s expectation of (wrongly) needing to
24 conform with the heightened pleading standard of the PSLRA. Judge Donato himself

25
26 ⁵ This is not the only conflation in Judge Donato’s Order that suggests prejudice. The Order
27 begins with the Court claiming that Plaintiff “sees *himself* as [Tesla’s] short-seller ‘arch-
28 nemesis’” (emphasis added). Nowhere in any version of any complaint Plaintiff filed in this case
does Plaintiff state this. The TAC actually states that “short-sellers” *as a group* are “Defendant
Musk’s arch-nemesis,” which is hardly contested given Defendant Musk’s open antagonism.

1 acknowledges twice in his Order that the PSLRA is “demanding,” yet his vague requirements
 2 (see ECF No. 101, stating in part, “Complaints running to 80 or more pages and accompanied by
 3 hundreds of pages of exhibits are typically not well-taken under Rule 8, and may be summarily
 4 dismissed on that basis”) set up an impossible pleading standard. Even when Plaintiff complied
 5 by filing a complaint of 78 pages in response, Judge Donato bristled that Plaintiff “has filed over
 6 4,000 pages of pleadings.” Keeping in mind the overwhelming paperwork burden that judges
 7 face—largely the result of statutory mandates—this *cumulative* measure of pages including
 8 *previous* complaints and their exhibits that the Court *never ruled upon*, and which triggered no
 9 warning at the time of filing, suggests the bias of a judge looking for a pretext to dismiss a case.

10 Other judges in this Court have taken the opposite approach when considering how Rule
 11 8 interacts with the PSLRA. As noted in Plaintiff’s opposition to Tesla Defendants’ Motion to
 12 Dismiss, “[T]he Ninth Circuit has cautioned against applying a strict requirement for a ‘short’
 13 statement under Rule 8 in light of the heightened pleading standards of Rule 9(b) and PSLRA”
 14 (citations omitted). *In Re Apple Inc. Securities Litigation*, Case No. 4:19-cv-02033-YGR (N.D.
 15 Cal. June 2, 2020). This citation was further supported by Plaintiff’s footnote 3:

16 “It is ‘perfectly understandable’ to ‘err[] on the side of detail and prolixity in an
 17 effort to explain the facts’ given the PSLRA’s heightened pleading standard, even
 18 while keeping Rule 8 in mind. *In re Global Crossing Ltd. Securities Litigation*,
 19 313 F. Supp. 2d 189, 212. See also *Gienko, et al v. Padda, et al*, Case No. 1:00-
 20 cv-05070 (N.D. Ill. February 27, 2002) (permitting complaint of 386 pages total
 21 under Rule 8). Notably, Tesla Defendants had no problem with the 82-page or
 110-page First and Second Amended Complaints, to which far more pages were
 attached. Only now do they protest the 78-page TAC, *by attaching 200 pages of
 their own*” (emphasis in original).

22 Most surprising is Judge Donato’s decision to move the goalposts for what is allowable
 23 under Rule 8 from no more than “80 [] pages” plus exhibits on January 15, 2021 to “no more
 24 than 50 pages inclusive of exhibits” on June 23. Rule 8 was not amended in the interim. While
 25 the urge to streamline litigation is laudable, this is an abuse of discretion that is inconsistent with
 26 Ninth Circuit and Northern District of California precedent. It also suggests that Judge Donato
 27
 28

1 was retaliating against Plaintiff for not following his vague order to some unspecified standard.⁶

2 **III. CONCLUSION**

3 Plaintiff respectfully requests that Judge Donato recuse himself from this case. He is
 4 conflicted with counsel for Defendants Elon Musk and Tesla, Inc., who used to be his co-worker.
 5 He is conflicted due to his own prior representation of two of Tesla's current key business
 6 partners. Whether conscious or unconscious, he has exhibited partiality in a variety of manners
 7 throughout the proceedings thus far. At this stage of the litigation, the end result of the complex
 8 dynamics described above is a Catch-22, where Plaintiff is required to plead an extreme "level of
 9 particularity" that Judge Donato calls "demanding" and that the Ninth Circuit has stated "does
 10 unnecessary violence to the fundamental tenets of notice pleading," but to simultaneously do so
 11 in a "short and plain statement" pursuant to Rule 8, within an arbitrary number of pages
 12 unrecognized by other federal judges that keeps decreasing. Accordingly, the deck is stacked.
 13 Plaintiff has no hope of amended claims being heard in an impartial manner before this Judge.

14
 15 Dated: July 16, 2021

Respectfully submitted,



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25
 26
 27
 28 ⁶ Similarly, Judge Donato threatened Plaintiff with sanctions for properly complying with
 Federal Rule of Civil Procedure 55 when Plaintiff filed applications for entry of default because
 Defendants Omar Qazi and Smick Enterprises, Inc. had failed to respond to multiple complaints,
 and because the Clerk of Court made an error due to another unwritten purported rule. ECF No.
 72. In his Order, Judge Donato further accused unspecified parties, but presumably Plaintiff, of
 having filed "personally disparaging" content in this case, without specifying the offending
 document(s) and/or statement(s) such that they might be avoided in the future. Plaintiff notes
 that text perhaps perceived as disparaging merely reflects the record of Defendants' often "lurid"
 and "nasty" conduct.

EXHIBIT A

June 22, 2021 Nvidia Corporation Blog Post: “Tesla Unveils Top AV Training Supercomputer
Powered by NVIDIA A100 GPUs”

Tesla Unveils Top AV Training Supercomputer Powered by NVIDIA A100 GPUs

‘Incredible’ GPU cluster powers AI development for Autopilot and full self-driving.

June 22, 2021 by DANNY SHAPIRO

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Reading Time: 2 mins

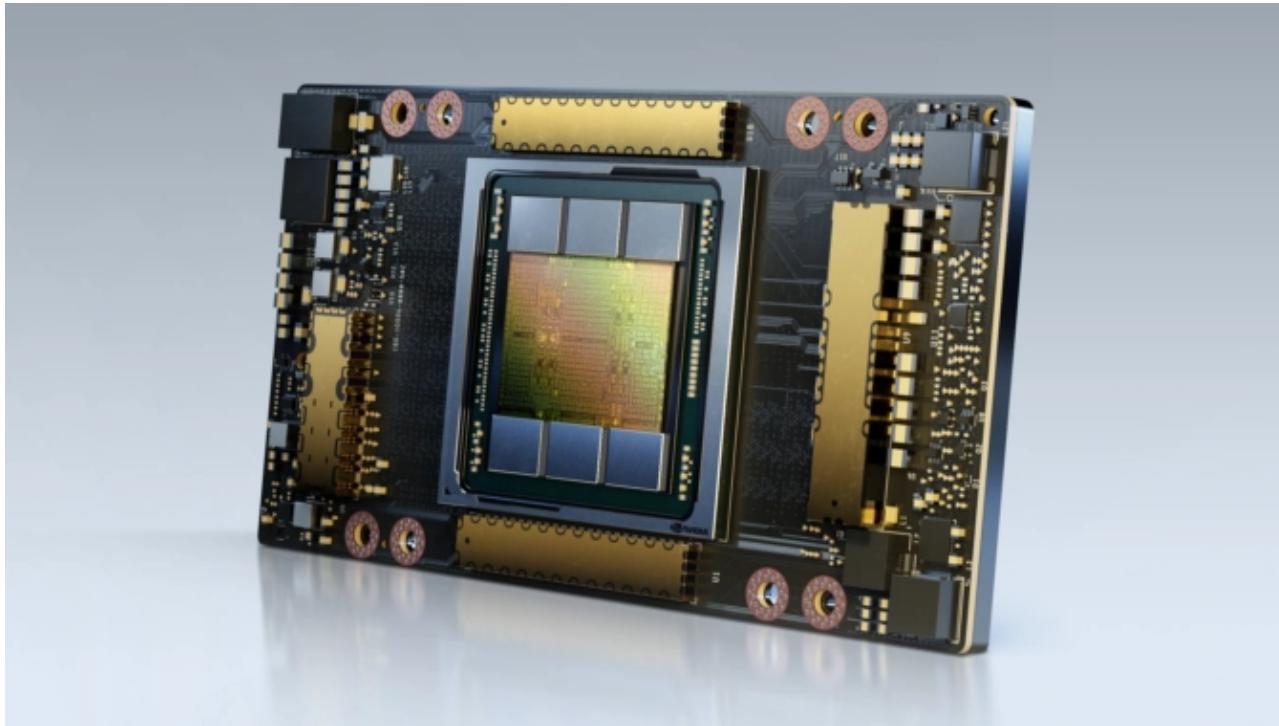
Tackling one of the largest computing challenges of this lifetime requires larger than life computing.

At CVPR this week, Andrej Karpathy, senior director of AI at Tesla, unveiled the in-house supercomputer the automaker is using to train deep neural networks for Autopilot and self-driving capabilities. The cluster uses 720 nodes of 8x NVIDIA A100 Tensor Core GPUs (5,760 GPUs total) to achieve an industry-leading 1.8 exaflops of performance.

“This is a really incredible supercomputer,” Karpathy said. “I actually believe that in terms of flops, this is roughly the No. 5 supercomputer in the world.”

With unprecedented levels of compute for the automotive industry at the center of its development cycle, Tesla is making it possible for autonomous vehicle engineers to do their life's work efficiently and at the cutting edge.

NVIDIA A100 GPUs deliver acceleration at every scale to power the world's highest-performing data centers. Powered by the NVIDIA Ampere Architecture, the A100 GPU provides up to 20x higher performance over the prior generation and can be partitioned into seven GPU instances to dynamically adjust to shifting demands.



The GPU cluster is part of Tesla's vertically integrated autonomous driving approach, which uses more than 1 million cars already driving on the road to refine and build new features for continuous improvement.

From the Car to the Data Center

Tesla's cyclical development begins in the car. A deep neural network running in "shadow mode" quietly perceives and makes predictions while the car is driving without actually controlling the vehicle.

These predictions are recorded, and any mistakes or misidentifications are logged. Tesla engineers then use these instances to create a training dataset of difficult and diverse scenarios to refine the DNN.

The result is a collection of roughly 1 million 10-second clips recorded at 36 frames per second, totaling a whopping 1.5 petabytes of data. The DNN is then run through these scenarios in the data center over and over until it operates without a mistake. Finally, it's sent back to the vehicle and begins the process again.

Karpathy said training a DNN in this manner and on such a large amount of data requires "a huge amount of compute," which led Tesla to build and deploy the current generation supercomputer with high-performance A100 GPUs.

In-house supercomputer

Our latest cluster (1 of 3):
720 nodes of 8x A100 80GB. (5760 GPUs total)
1.8 EFLOPS (720 nodes * 312 TFLOPS-FP16-A100 * 8 gpu/nodes)
10 PB of "hot tier" NVME storage @ 1.6 TBps
640 Tbps of total switching capacity

(next up: Dojo)

Help us build & maintain the cluster! supercomputing@tesla.com

zoom

Continuous Iteration

In addition to comprehensive training, Tesla's supercomputer gives autonomous vehicle engineers the performance needed to experiment and iterate in the development process.

Karpathy said the current DNN structure the automaker is deploying allows a team of 20 engineers to work on a single network at once, isolating different features for parallel development.

These DNNs can then be run through training datasets at speeds faster than what has been previously possible for rapid iteration.

"Computer vision is the bread and butter of what we do and enables Autopilot. For that to work, you need to train a massive neural network and experiment a lot," Karpathy said. "That's why we've invested a lot into the compute."

Watch the full CVPR session.

Categories: Driving

Tags: Automotive | NVIDIA DGX

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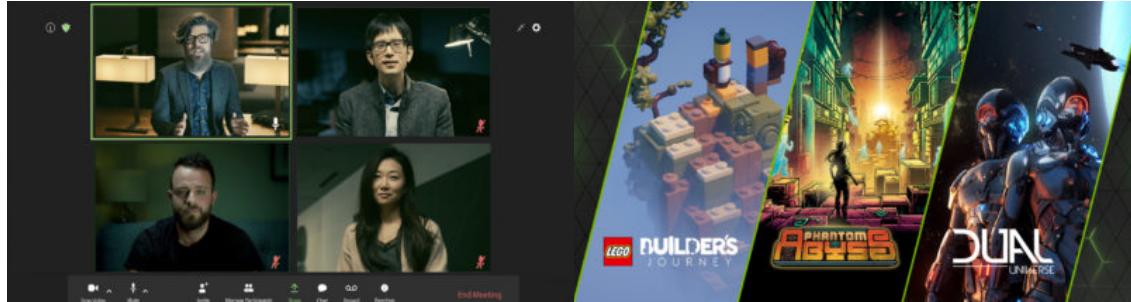
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Sherd Alert: GPU-Accelerated Deep Learning Sorts Pottery Fragments as Well as Expert Archeologists

EXHIBIT B

March 9, 2021 *Reuters* Article: “Exclusive: LG hopes to make new battery cells for Tesla in 2023 in U.S. or Europe – sources”



AUTOS MARCH 9, 2021 / 11:27 AM / UPDATED 4
MONTHS AGO

Exclusive: LG hopes to make new battery cells for Tesla in 2023 in U.S. or Europe - sources

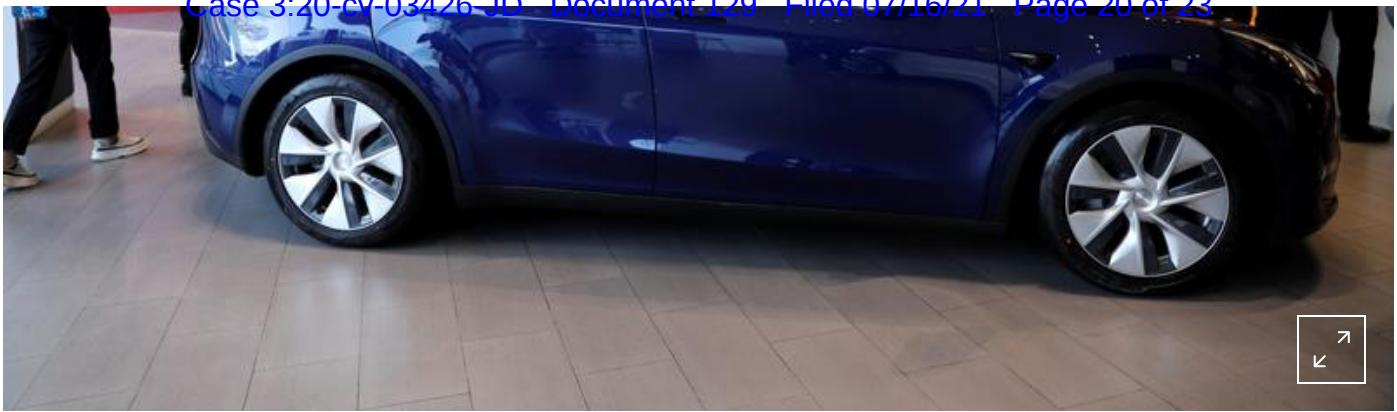
By Hyunjoo Jin

4 MIN READ



SAN FRANCISCO (Reuters) - LG Energy Solution aims to build advanced battery cells for Tesla Inc electric vehicles in 2023 and is considering potential production sites in the United States and Europe, two people familiar with the matter told Reuters.





FILE PHOTO: Visitors wearing face masks check a China-made Tesla Model Y sport utility vehicle (SUV) at the electric vehicle maker's showroom in Beijing, China January 5, 2021. REUTERS/Tingshu Wang

Tesla has not yet agreed to a deal that would expand LG's role in its supply chain beyond China, one of the sources said.

Last week, the Korean battery maker told Korean reporters it plans to build a U.S. factory where it would make battery cells for EVs and energy storage systems, to cater to U.S. and global customers as well as startups. It did not identify potential customers then, but one of the sources said it was hoping Tesla would buy the batteries.

In September, Tesla Chief Executive Elon Musk announced an ambitious plan to develop new cells in-house, prompting suppliers like LG and Panasonic to embrace the unproven technology or face risks of losing a major customer for the longer term.

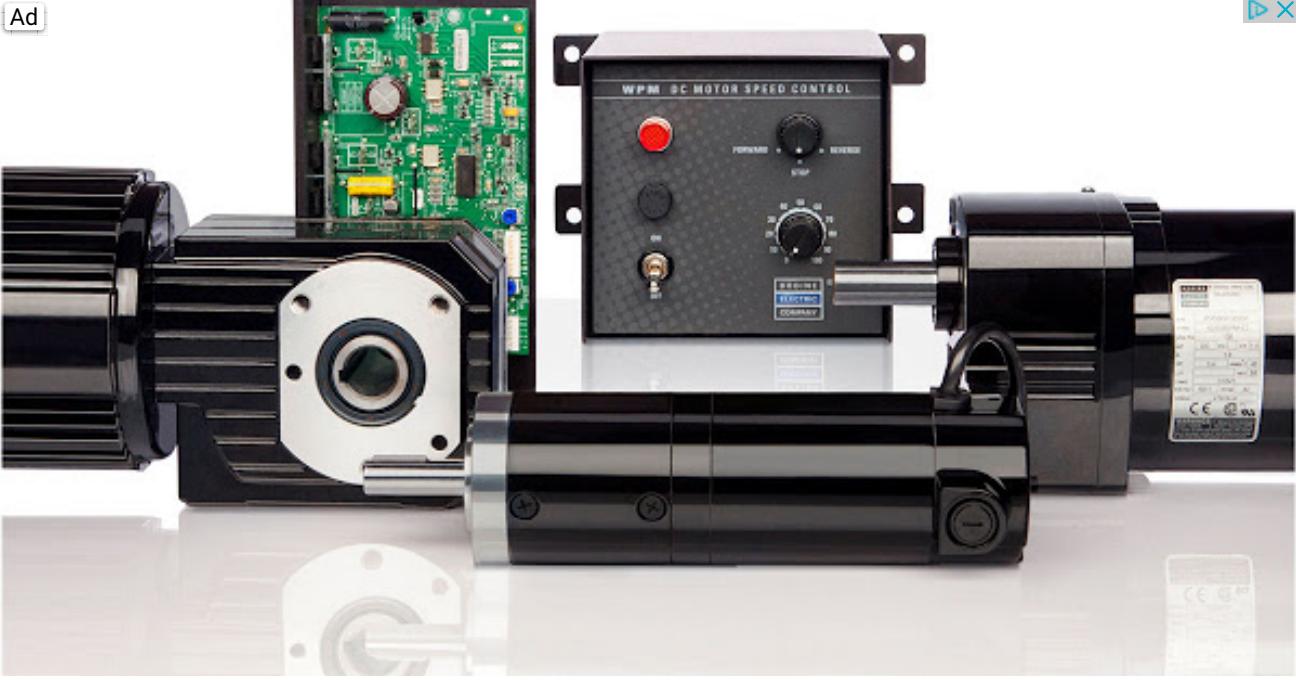
The Korean supplier, a unit of LG Chem, has made samples for the so-called 4680 large-format cylindrical cells, said the sources, who asked not to be identified. It faces technological hurdles and the challenge of scaling up production, people familiar with the matter said.

“LG plans to produce 4680 cells at its new U.S. factory. They plan to build a new 4680 cell line to supply Tesla’s Giga Berlin in Europe,” one of the sources said, adding Spain is one of candidate for the European plant.

One of the sources said LG has never mass produced such large-format cylindrical cells, although increasing battery capacity is the correct call. “Tesla is a major customer, and LG can take risks,” another source said.

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He said LG has not yet secured orders from Tesla for the 4680 cells, still under development. For now, Tesla is sharply boosting orders for 2170 cells used in the Model 3 and Model Y vehicles made in China, the source said.

LG declined to comment, and Tesla officials could not be reached for comment.

Tesla’s September plan to develop the new 4680 battery cells is meant to reduce production costs, improve battery performance and increase driving range. This would help with Tesla’s push to boost electric vehicle production significantly around the world.

Tesla is running a pilot factory for the new battery cells in California, and

Musk said recently Tesla is in talks with battery suppliers about developing 4680 batteries. He said Tesla will use the current cells for at least a few years, but will “retire” those cells over time.

LG currently supplies smaller cells to Tesla in China, as does Chinese battery maker CATL. Panasonic has partnered with Tesla in a \$5 billion battery “gigafactory” near Reno, Nevada.

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The advertisement displays a high-performance gearmotor assembly. It consists of a black metal housing with a large, ribbed cylindrical output shaft. A green printed circuit board (PCB) is mounted on top of the motor, featuring various electronic components like resistors, capacitors, and a central processing unit (CPU). To the right of the motor is a black control box labeled "WPM DC MOTOR SPEED CONTROL". The control box has several buttons and a small display screen. A power cord is connected from the motor to the control box. The entire assembly is shown against a white background.

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LG currently has a \$2.3 billion joint venture with General Motors Co in Lordstown, Ohio, to make pouch-type electric vehicle batteries for future GM electric vehicles.

GM said separately it is considering building a second U.S. battery factory with LG.

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The unusually candid comments from LG and GM came after another Korean battery supplier, SK Innovation, hopes the White House would overturn a recent U.S. trade ruling favoring LG, saying it threatens to disrupt battery supplies to Ford Motor and Volkswagen.

Tesla rival Lucid Motors, which has a multi-year supply deal with LG Chem, and is considering whether to make its own cells in house, said it is interested in different cell formats, Chief Executive Officer Peter Rawlinson earlier told Reuters.

Panasonic plans to start a test line for 4680 cells in Japan in the business year beginning April 1, according to a person familiar with the matter. The two companies have not said if they plan to collaborate on production of the 4680 cells.

Tesla may need to push out the timeframe for mass production, or work with partners at its newer plants in order to get cell production up and running quickly, said Caspar Rawles, an analyst at researcher Benchmark Mineral Intelligence.

Additional reporting by Paul Lienert in Detroit, Tim Kelly in Tokyo and Heekyong Yang in Seoul; editing by Ben Klayman and David Gregorio

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